

KIC 010549371

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
010549371-01	OBS	No	0.566565	131.606982	14.7	0.888	8.5	5.9	2.46	7196	1.10	55080.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010549371-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

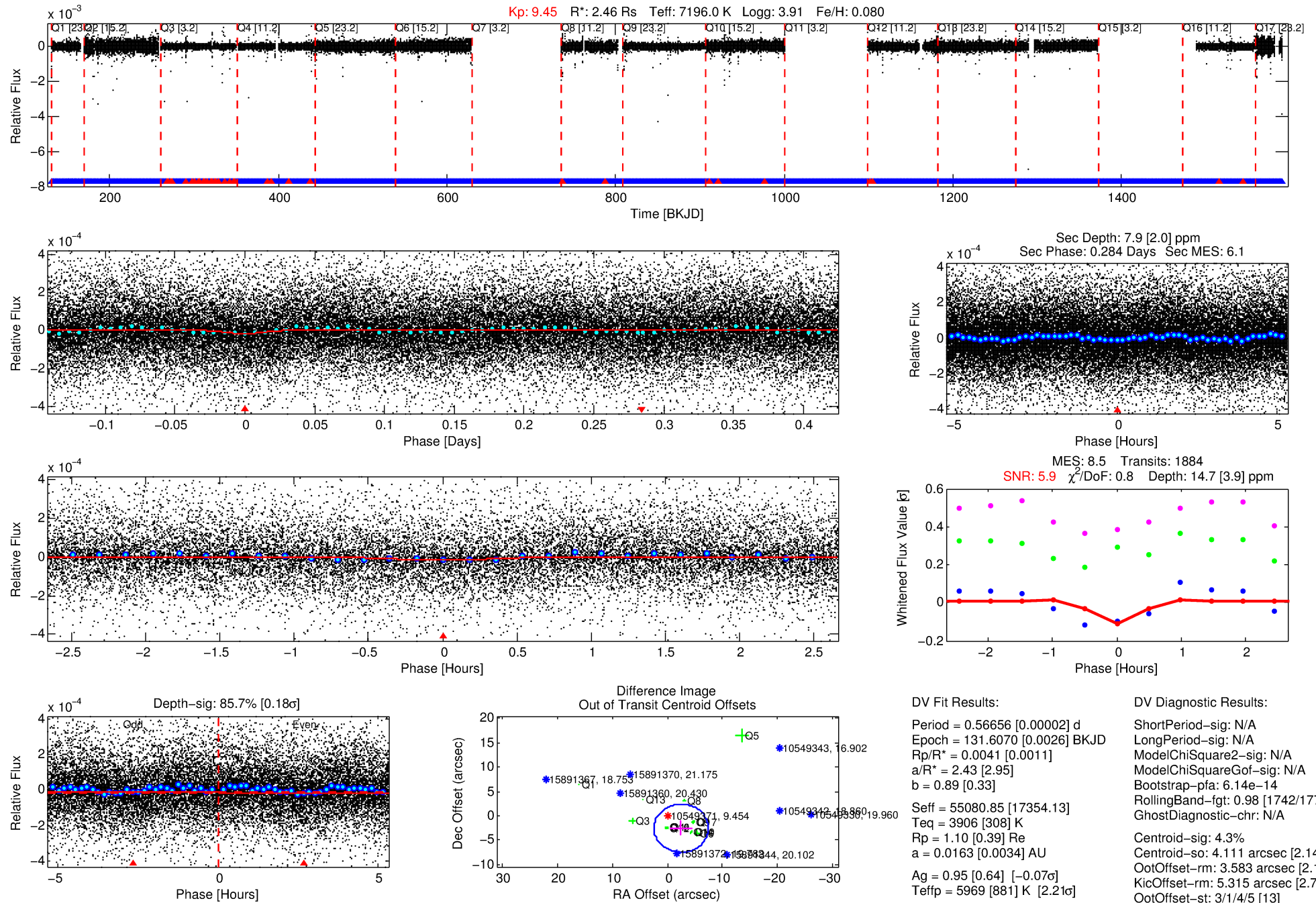
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010549371-01

No Significant Match Found

DV One-Page Summary

KIC: 10549371 Candidate: 1 of 1 Period: 0.567 d



Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:57:46 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

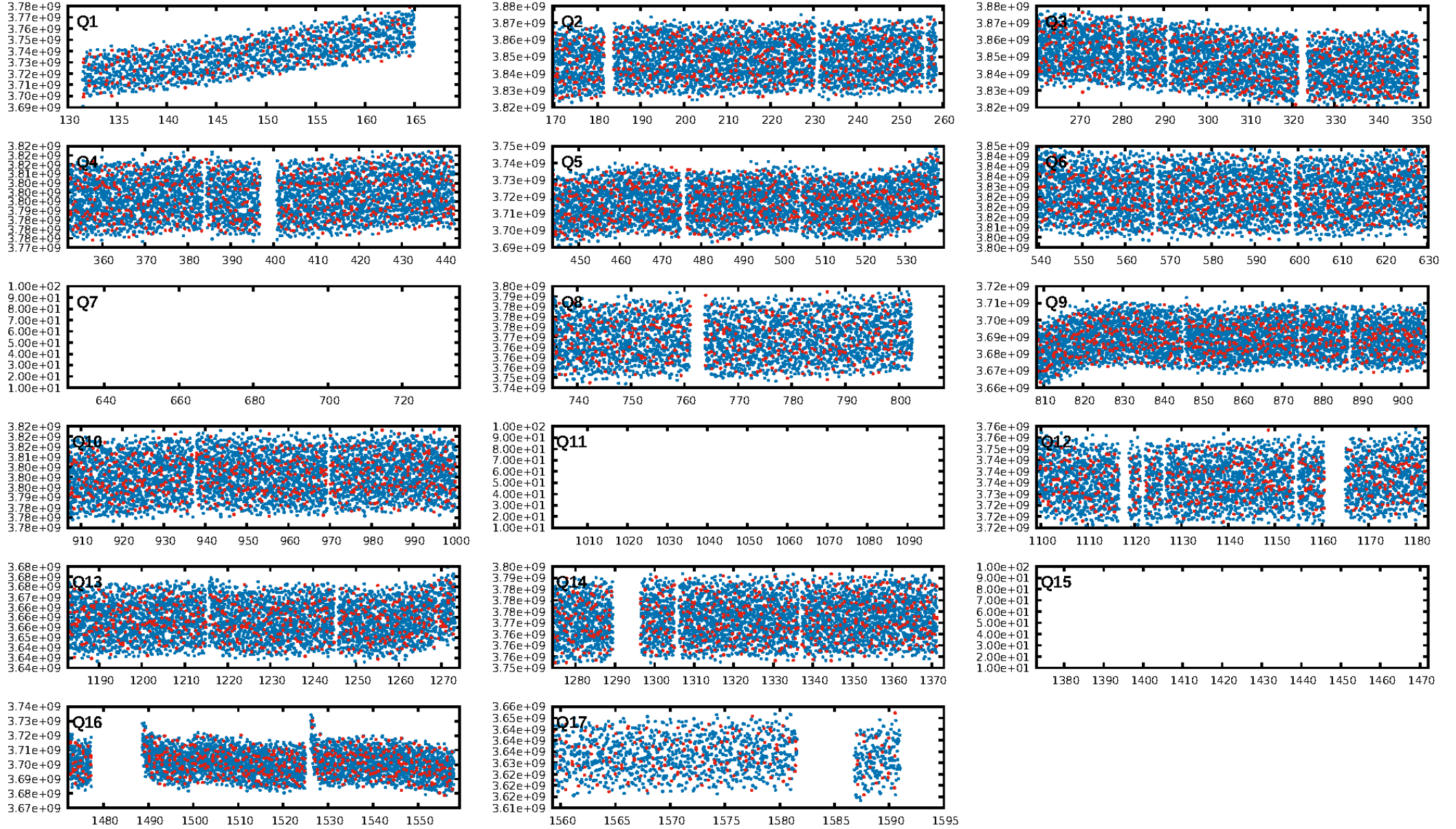
DV Fit Results:

Period = 0.56656 [0.00002] d
Epoch = 131.6070 [0.0026] BKJD
Rp/R* = 0.0041 [0.0011]
a/R* = 2.43 [2.95]
b = 0.89 [0.33]
Seff = 55080.85 [17354.13]
Teff = 3906 [308] K
Rp = 1.10 [0.39] Re
a = 0.0163 [0.0034] AU
Ag = 0.95 [0.64] [-0.07σ]
Teffp = 5969 [881] K [2.21σ]

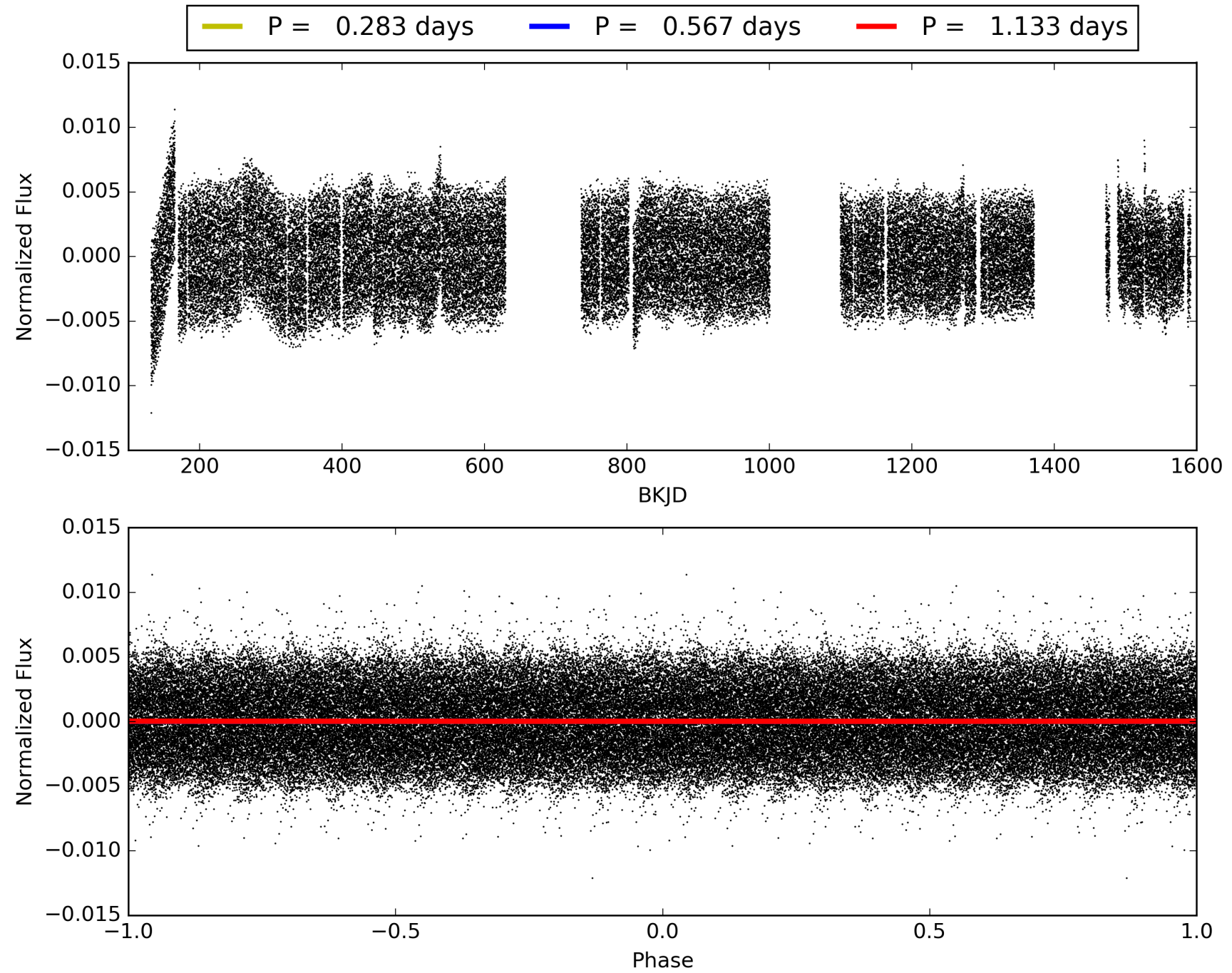
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.14e-14
RollingBand-fgt: 0.98 [1742/1778]
GhostDiagnostic-chr: N/A
Centroid-sig: 4.3%
Centroid-so: 4.111 arcsec [2.14σ]
OotOffset-rm: 3.583 arcsec [2.18σ]
KicOffset-rm: 5.315 arcsec [2.70σ]
OotOffset-st: 3/1/4/5 [13]
KicOffset-st: 3/1/4/5 [13]
DiffImageQuality-fgm: 0.00 [0/13]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 010549371-01, PDC Light Curves

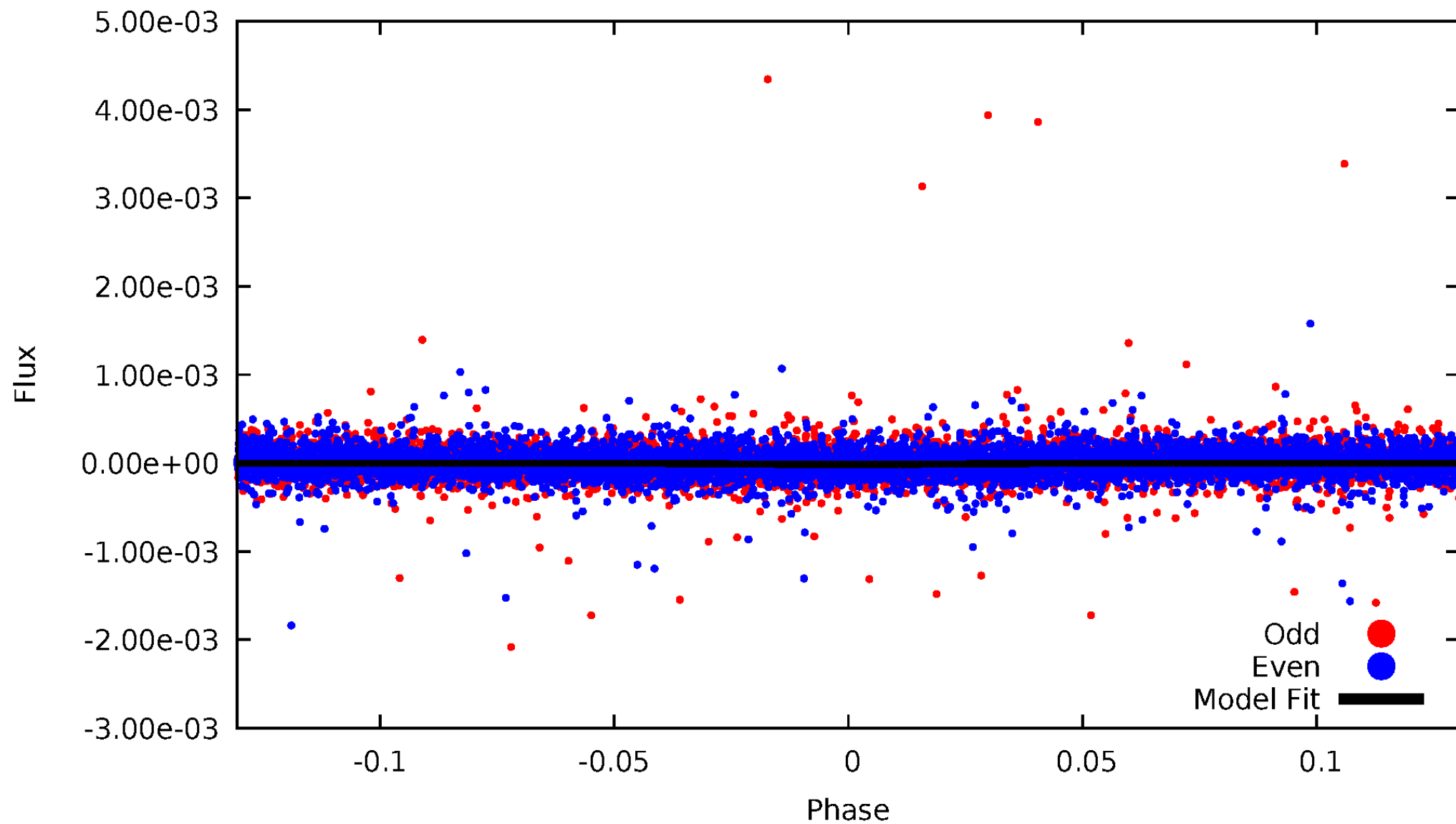


TCE 010549371-01



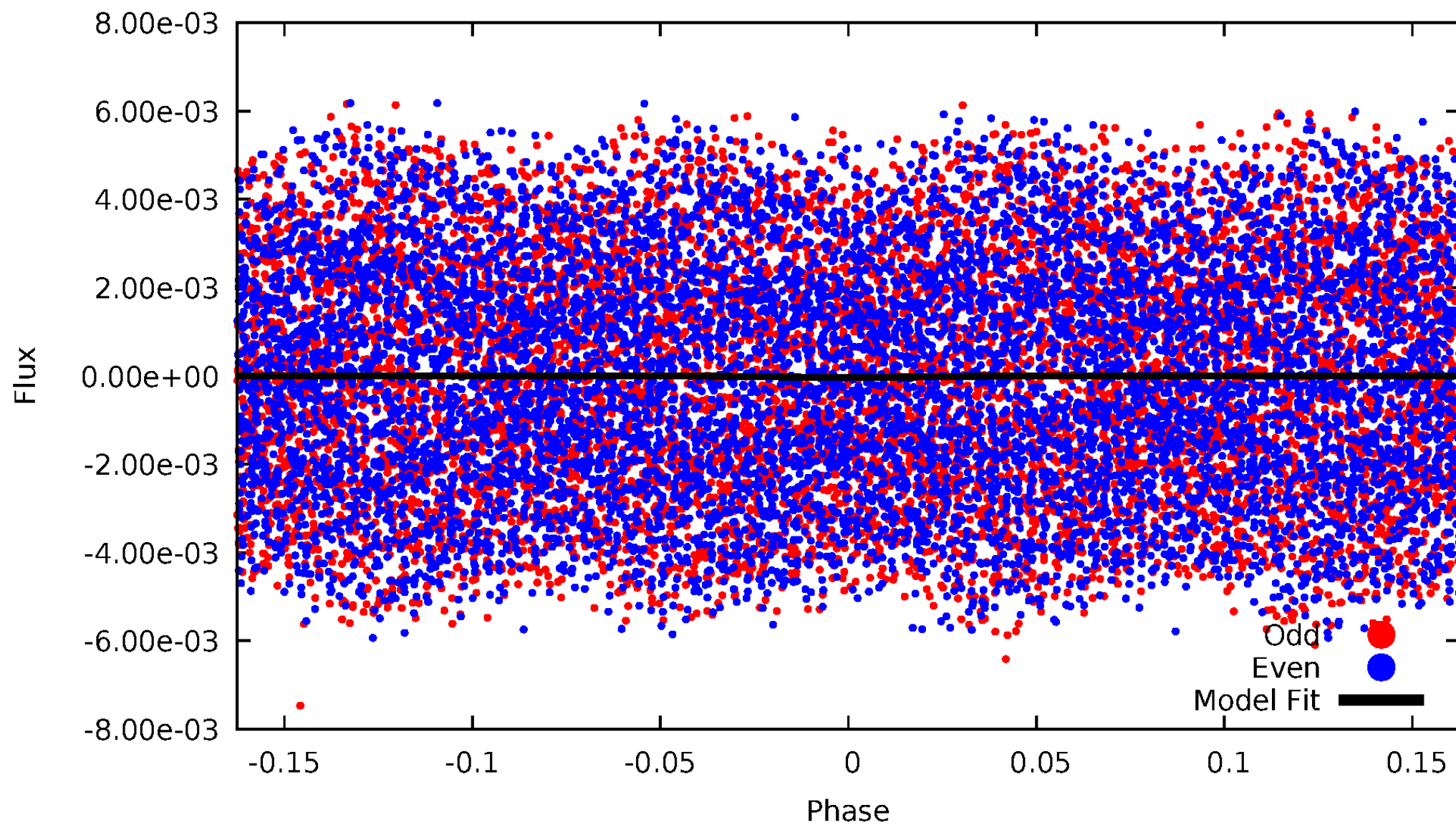
DV Odd/Even

TCE 010549371-01



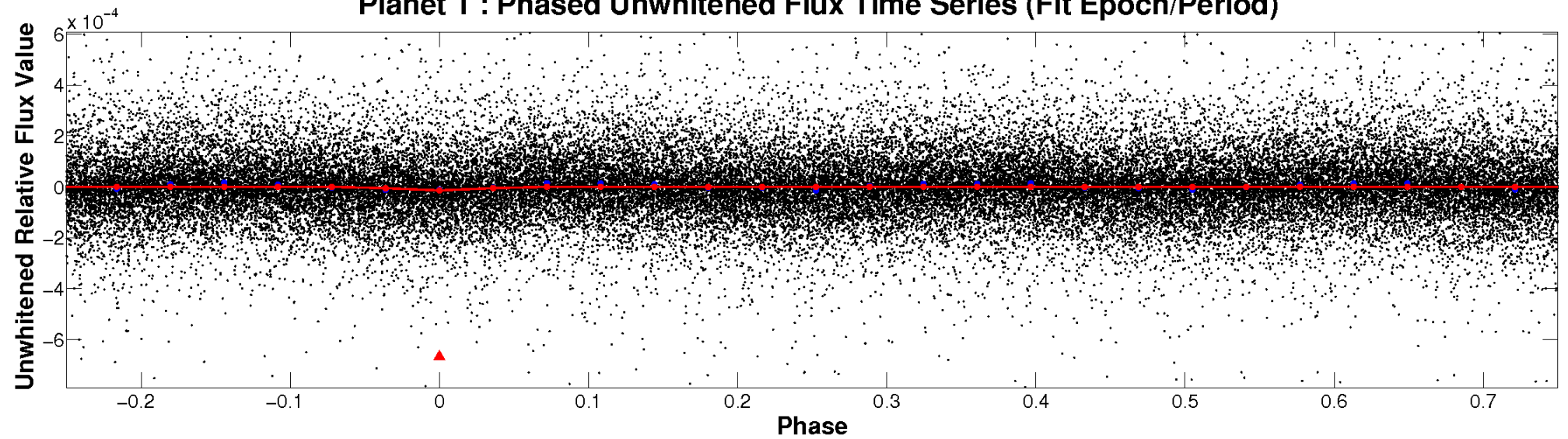
ALT Odd/Even

TCE 010549371-01

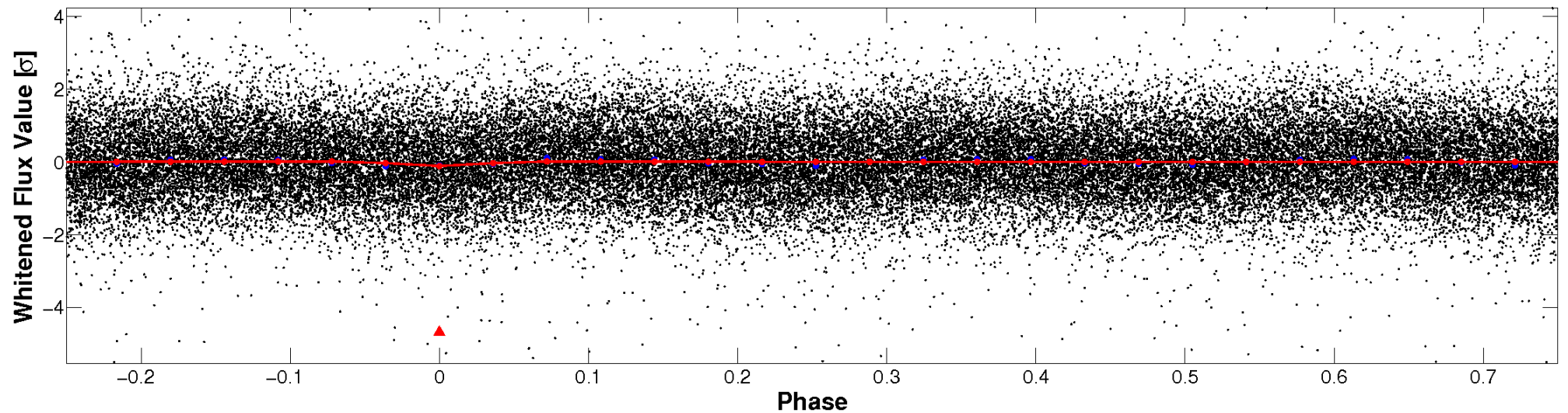


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

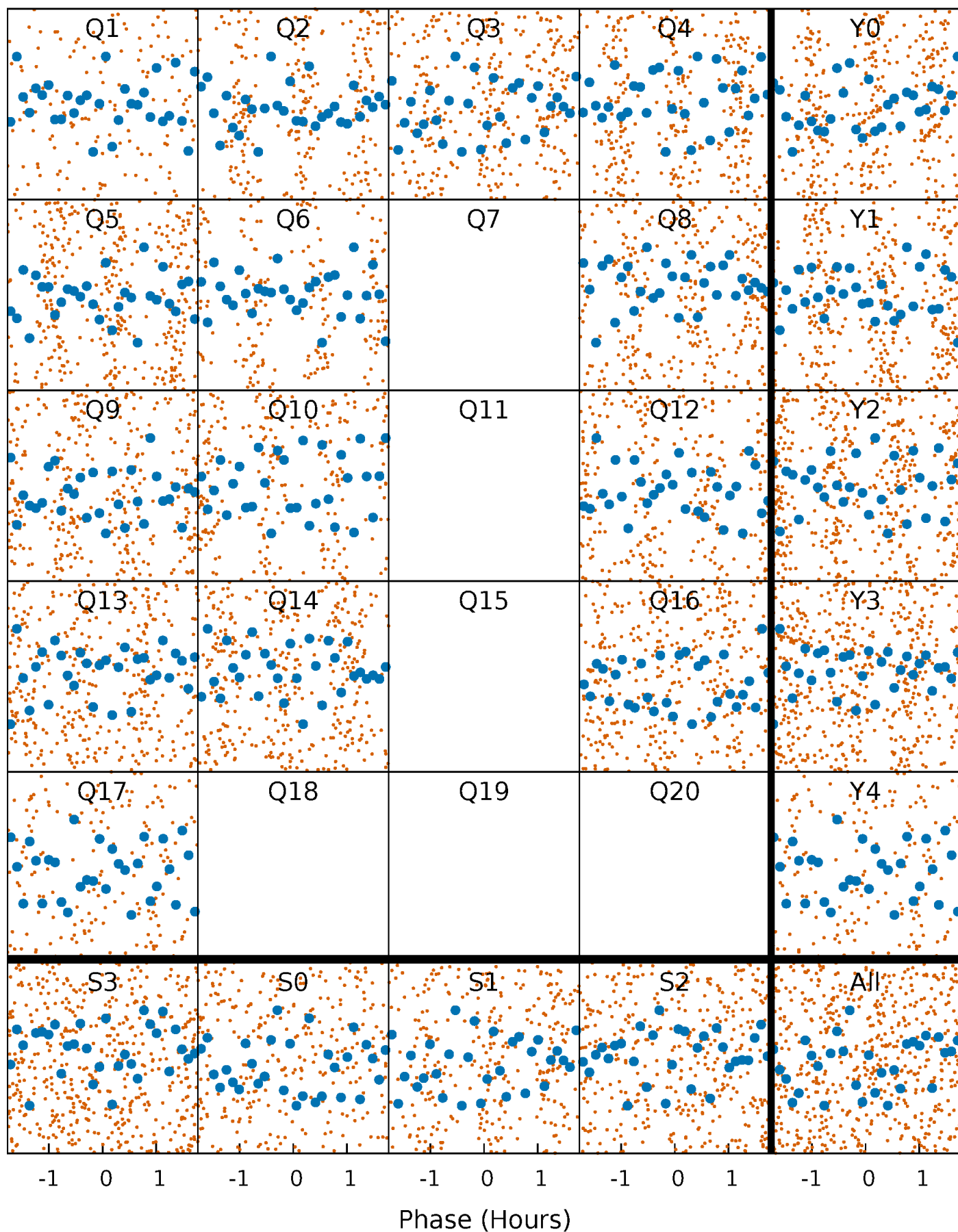


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



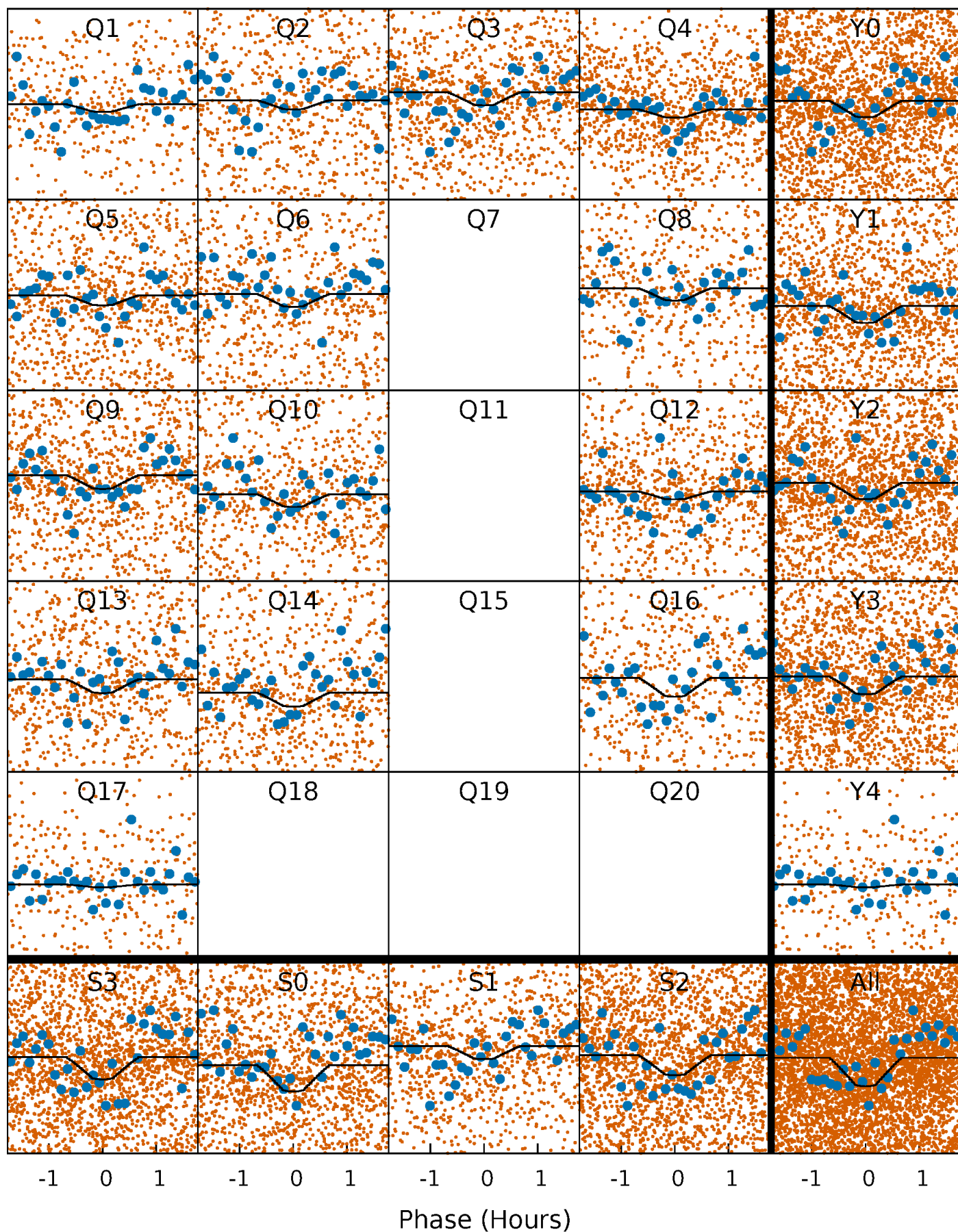
PDC Quarter-Phased Transit Curves

TCE 010549371-01 P= 0.566565 Days $T_0=131.606982$ (BKJD)



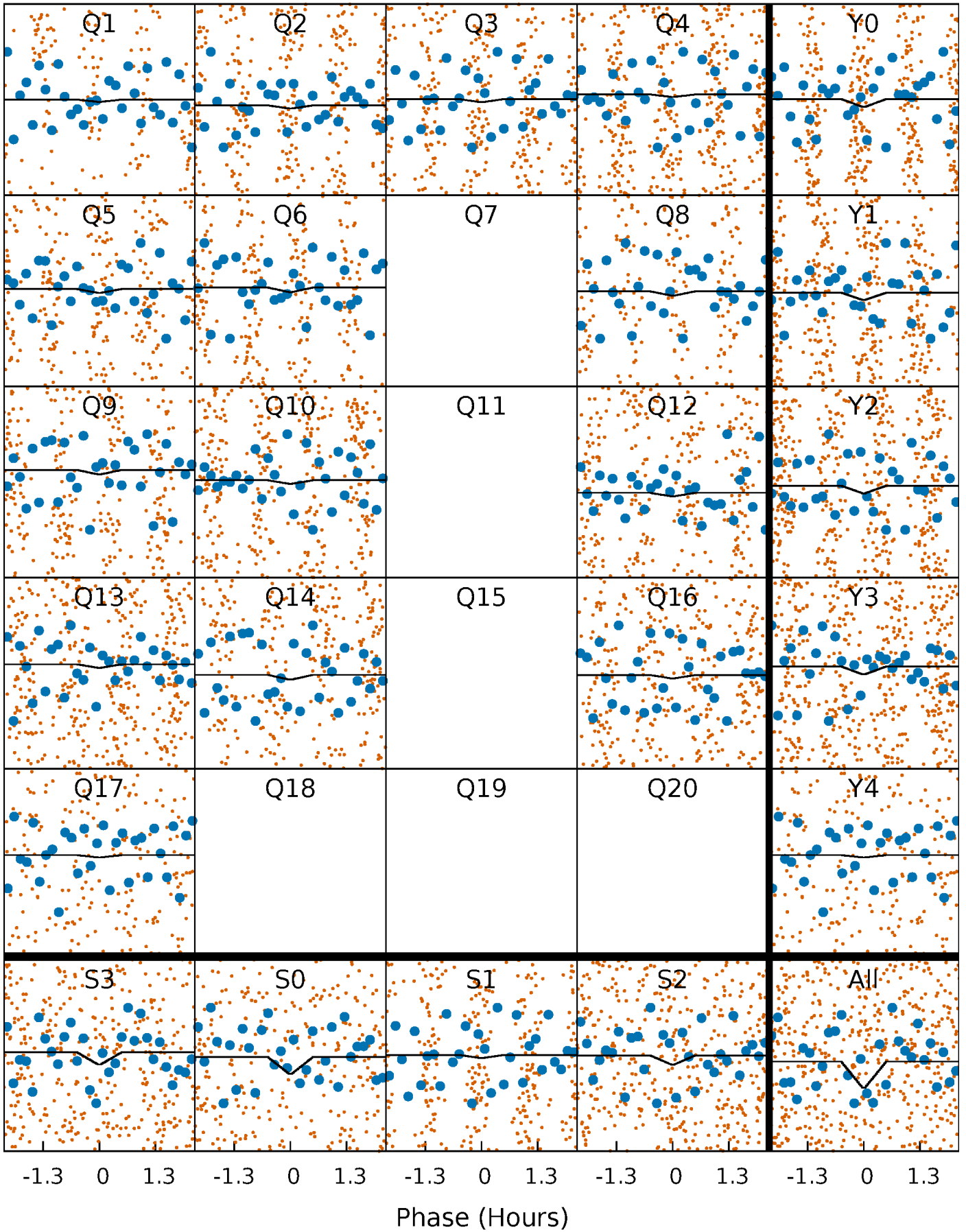
DV Quarter-Phased Transit Curves

TCE 010549371-01 P= 0.566565 Days $T_0=131.606982$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

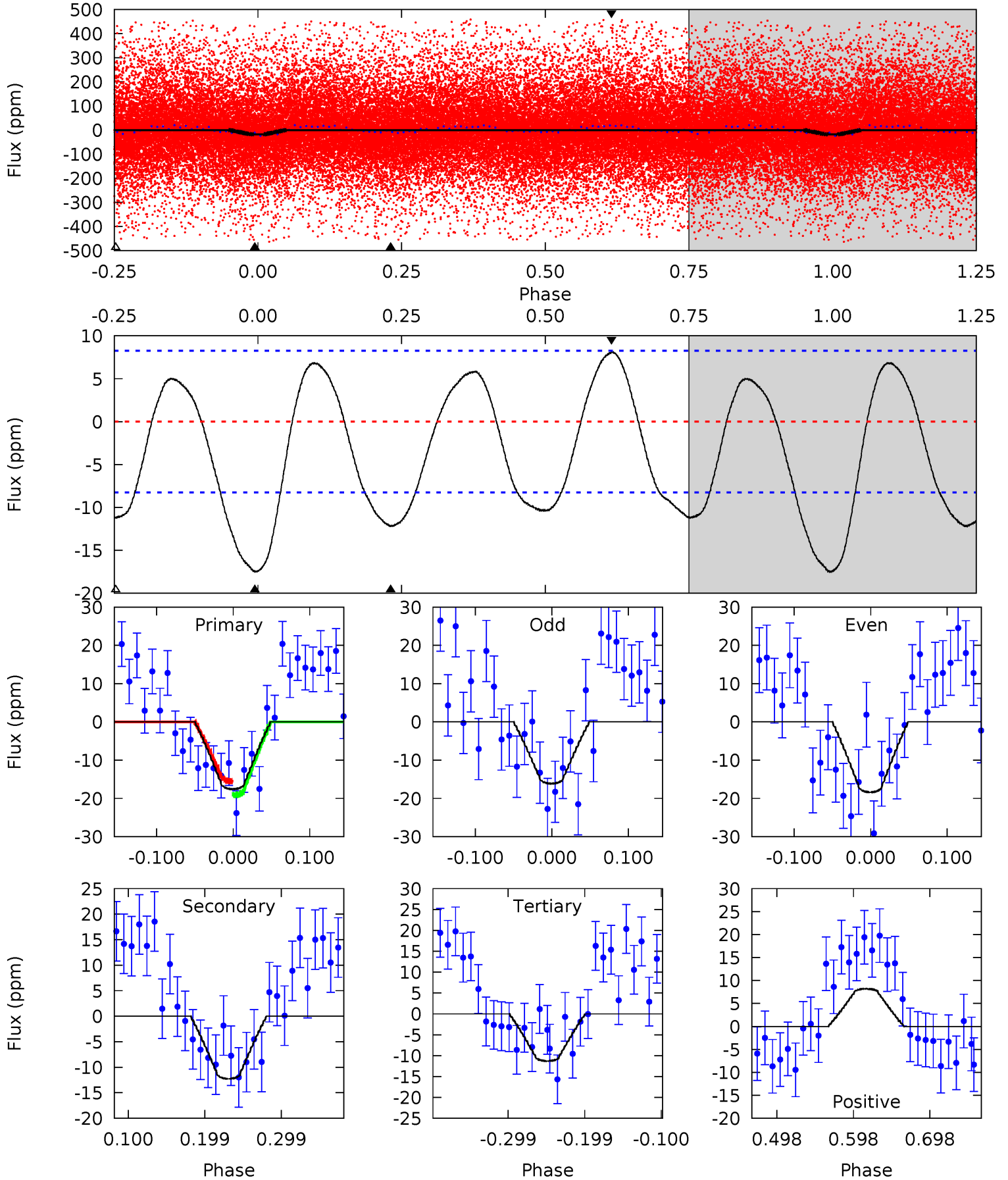
TCE 010549371-01 P= 0.566565 Days $T_0=131.614801$ (BKJD)



DV Model-Shift Uniqueness Test

010549371-01, P = 0.566565 Days, E = 131.040417 Days

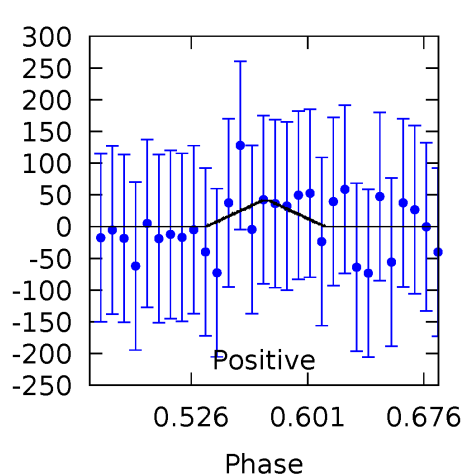
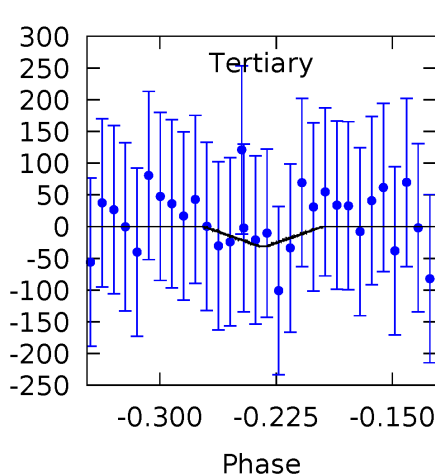
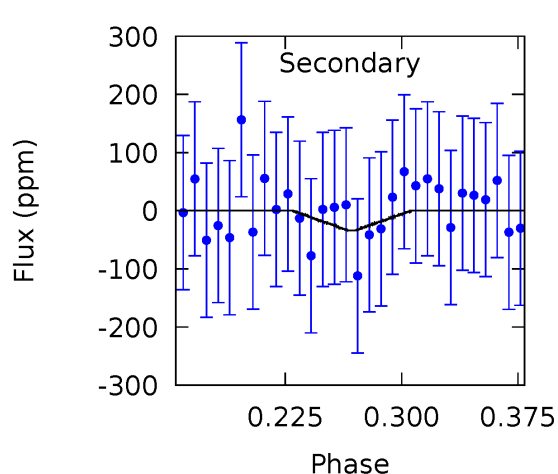
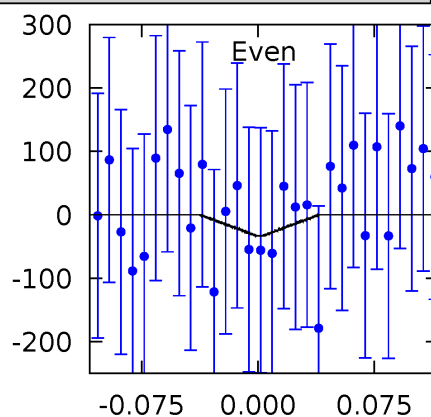
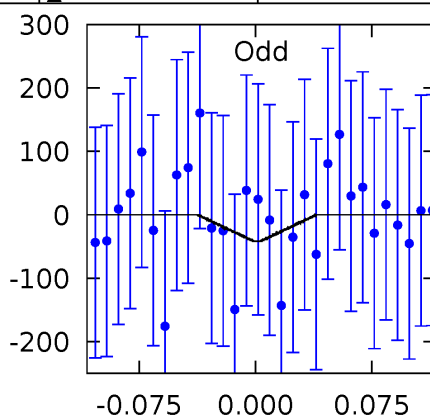
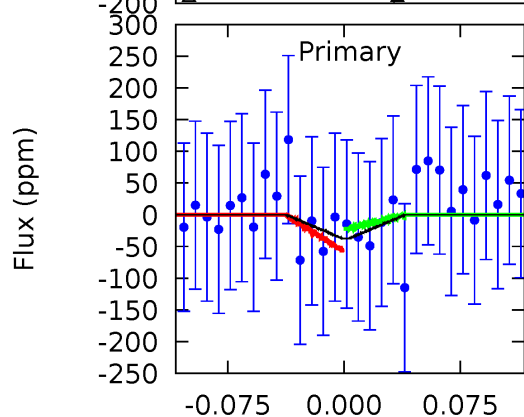
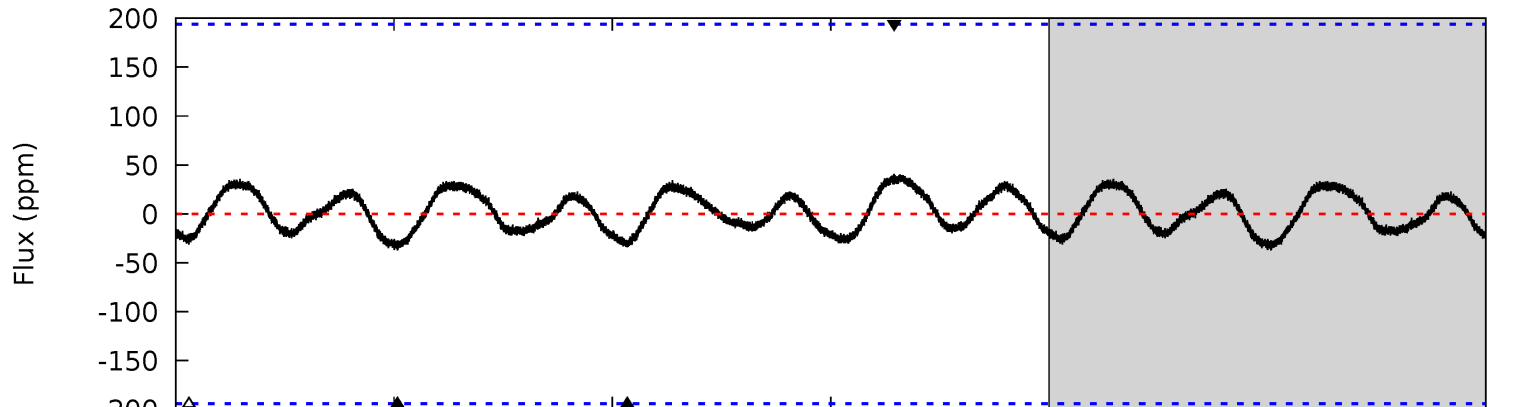
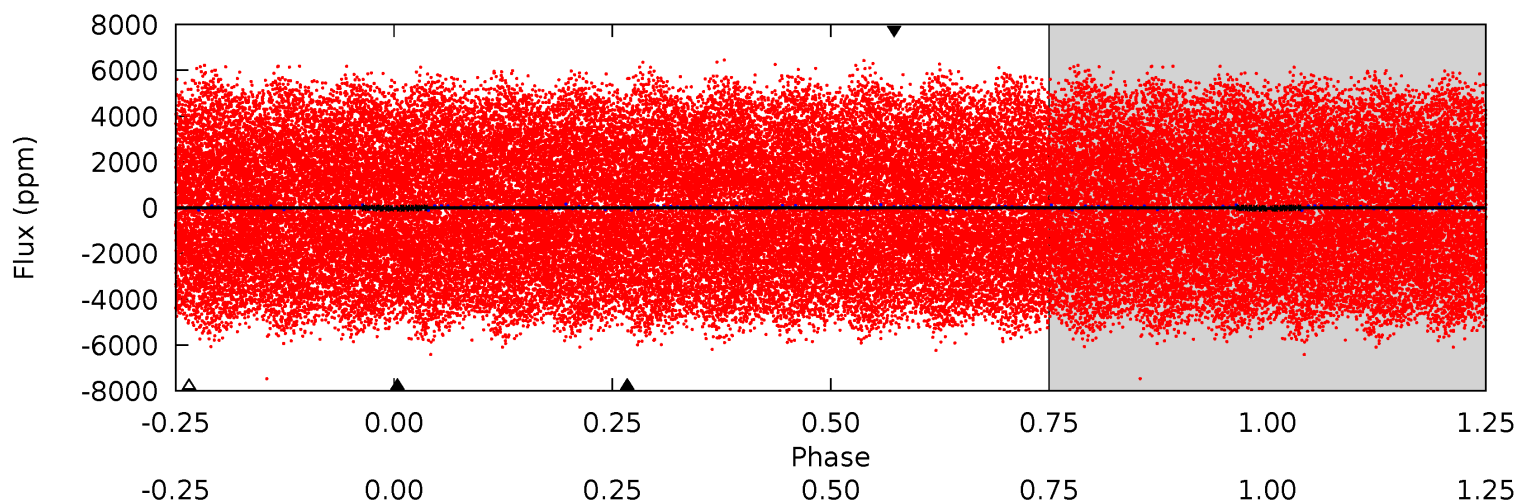
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.72	6.78	6.24	4.52	4.57	1.65	3.64	3.48	5.19	0.54	2.26	0.63	0.77	0.32	1.01



Alt Model-Shift Uniqueness Test

010549371-01, P = 0.566565 Days, E = 131.048236 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.89	0.81	0.74	0.98	4.62	1.78	0.41	0.15	-0.09	0.07	-0.16	0.10	0.97	0.52	0.40



Stellar Parameters For KIC 010549371

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7196^{+79}_{-79}	$3.907^{+0.176}_{-0.108}$	$0.080^{+0.150}_{-0.150}$	$2.461^{+0.384}_{-0.576}$	$1.784^{+0.156}_{-0.214}$	$0.169^{+0.148}_{-0.052}$
	+1%/-1%	+5%/-3%	+188%/-188%	+16%/-23%	+9%/-12%	+88%/-31%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010549371-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-12 ± 2	$1.08^{+0.33}_{-0.31}$	5443^{+237}_{-313}	6235^{+1367}_{-862}	$1.529^{+1.457}_{-0.615}$
Alt.	-34 ± 42	$1.59^{+0.39}_{-0.33}$	5448^{+244}_{-291}	6716^{+2227}_{-12427}	$1.878^{+2.822}_{-2.432}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

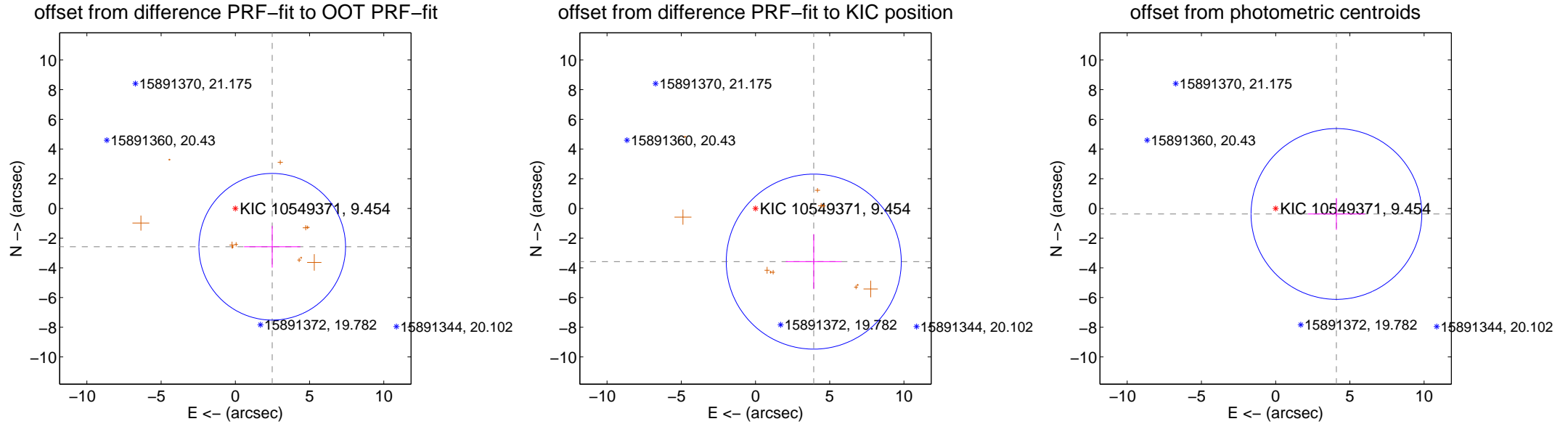
DV Centroid Data

Supplemental centroid analysis for 010549371-01. **Kepler magnitude: 9.45.** Transit SNR 5.88

There are 0 quarters with good PRF difference image offsets

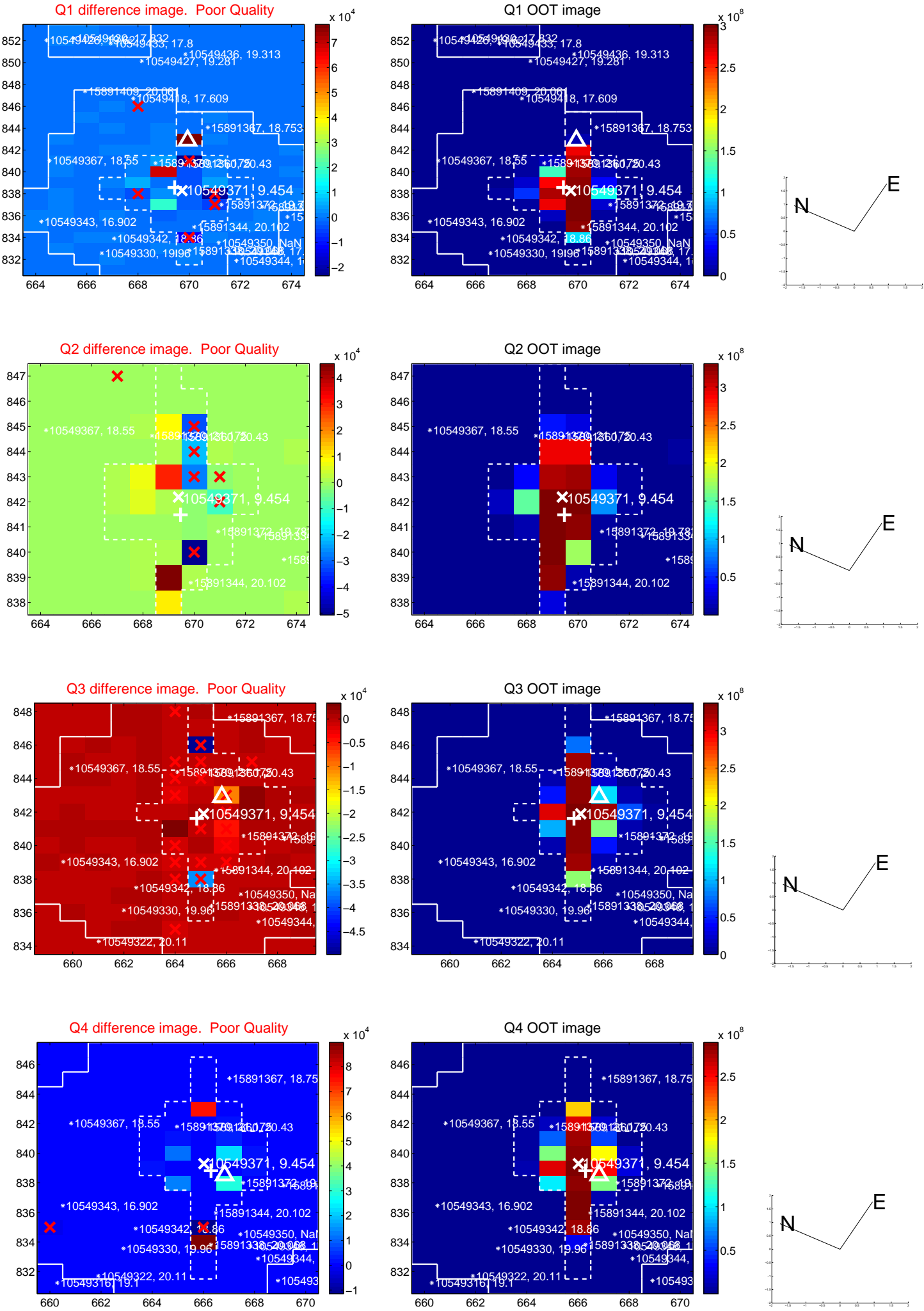
The direct PRF centroid is offset from the target star catalog position by about 1.47 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.583 ± 1.647	2.18	-2.485 ± 1.899	-2.581 ± 1.403
PRF-fit source offset from KIC position	5.315 ± 1.965	2.70	-3.926 ± 1.883	-3.582 ± 1.852
photometric centroid source offset	4.11 ± 1.92	2.14	-4.09 ± 1.92	-0.37 ± 1.07

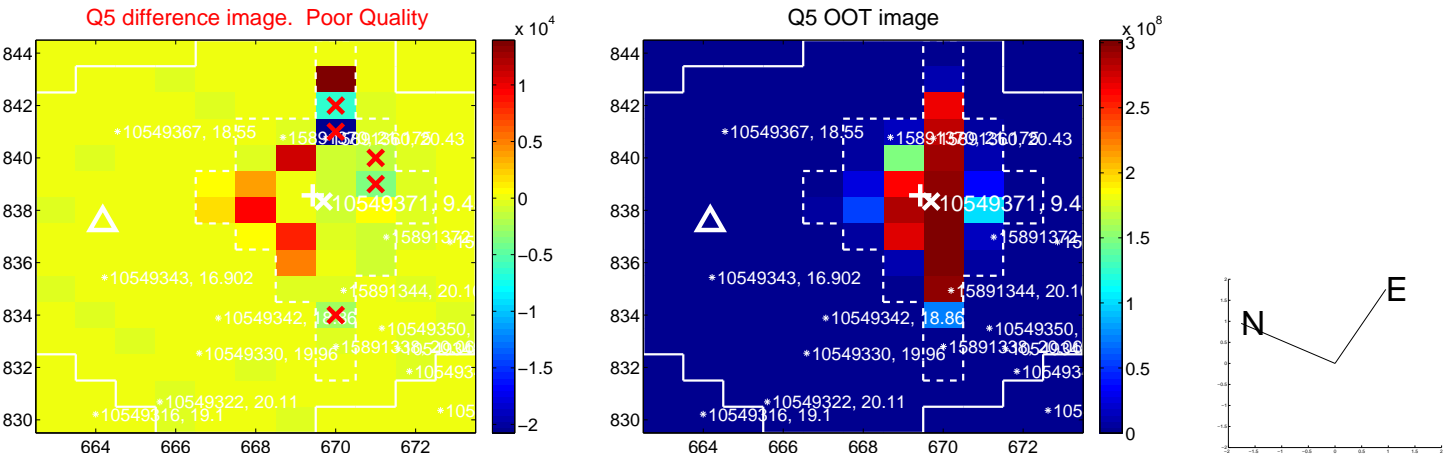


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

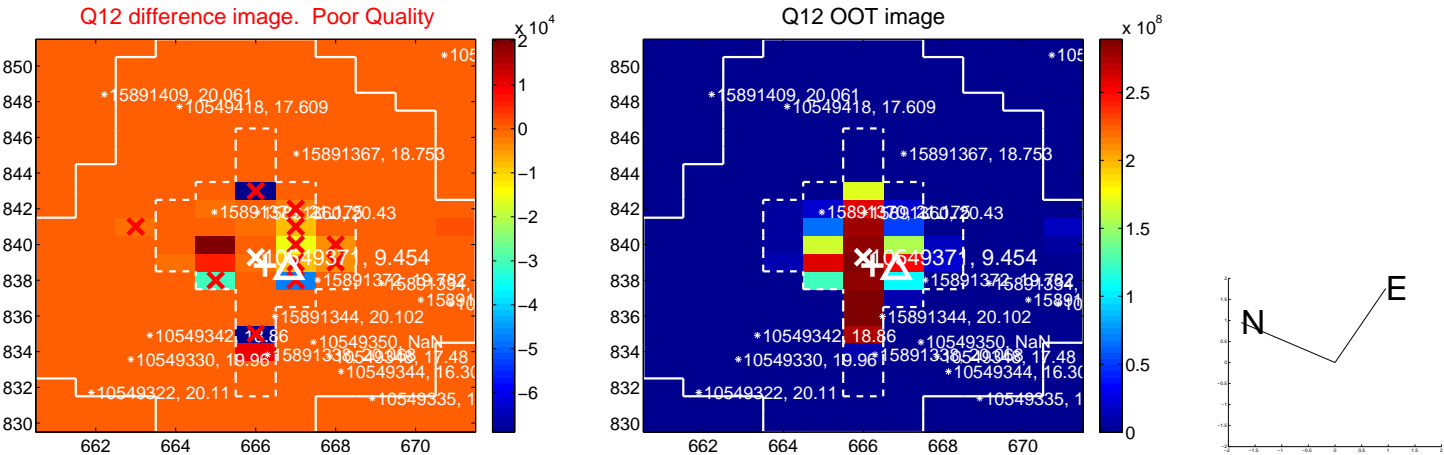
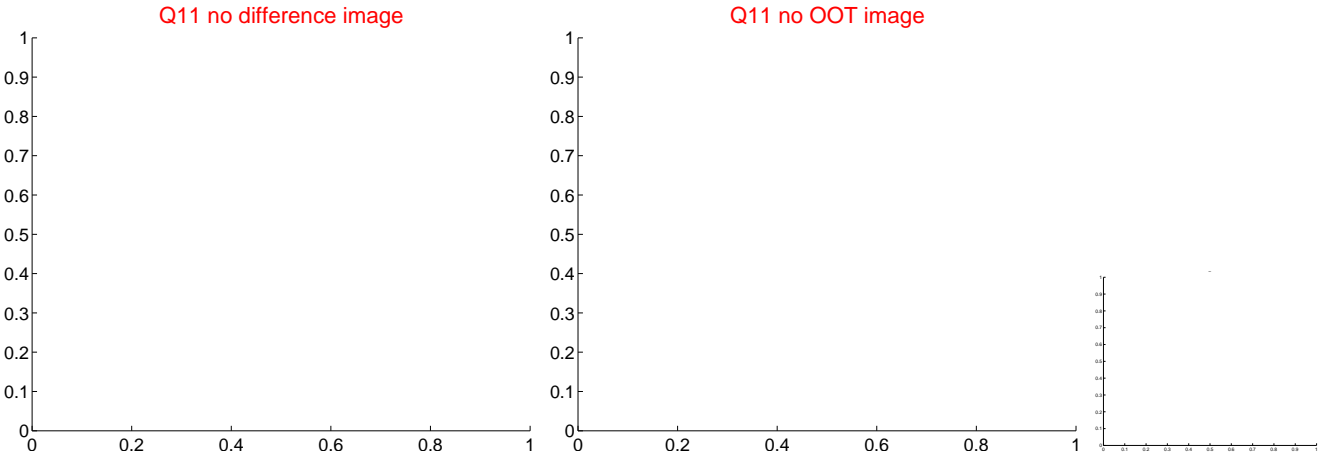
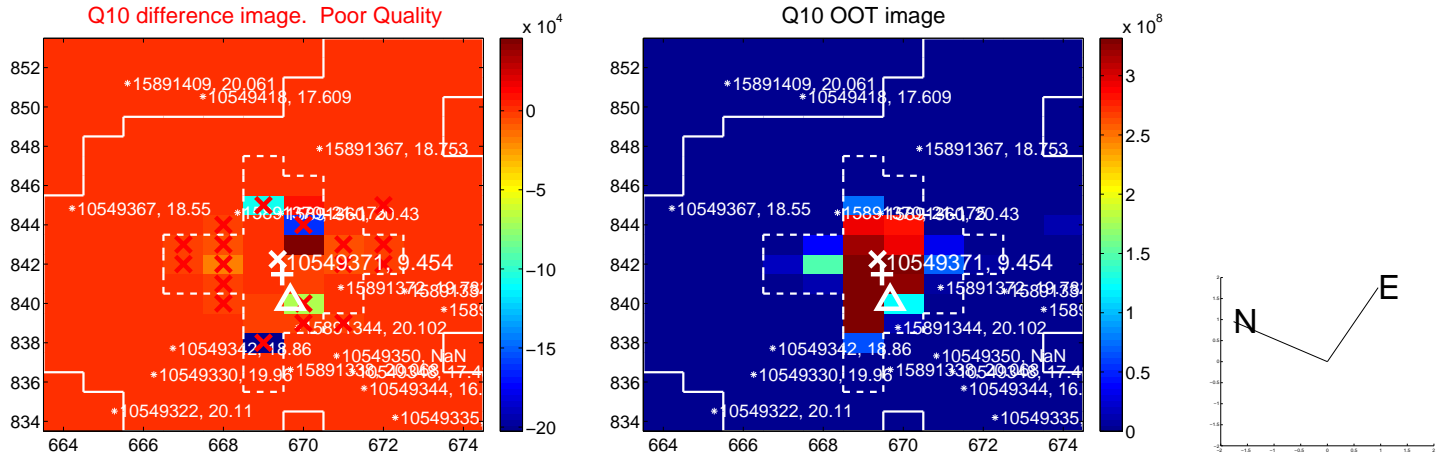
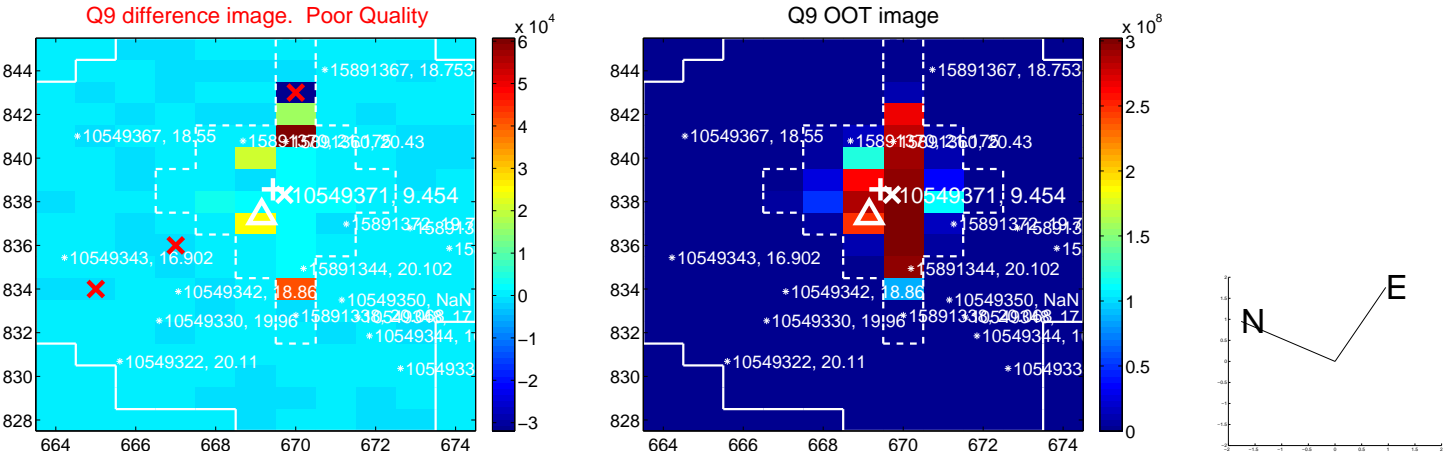
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



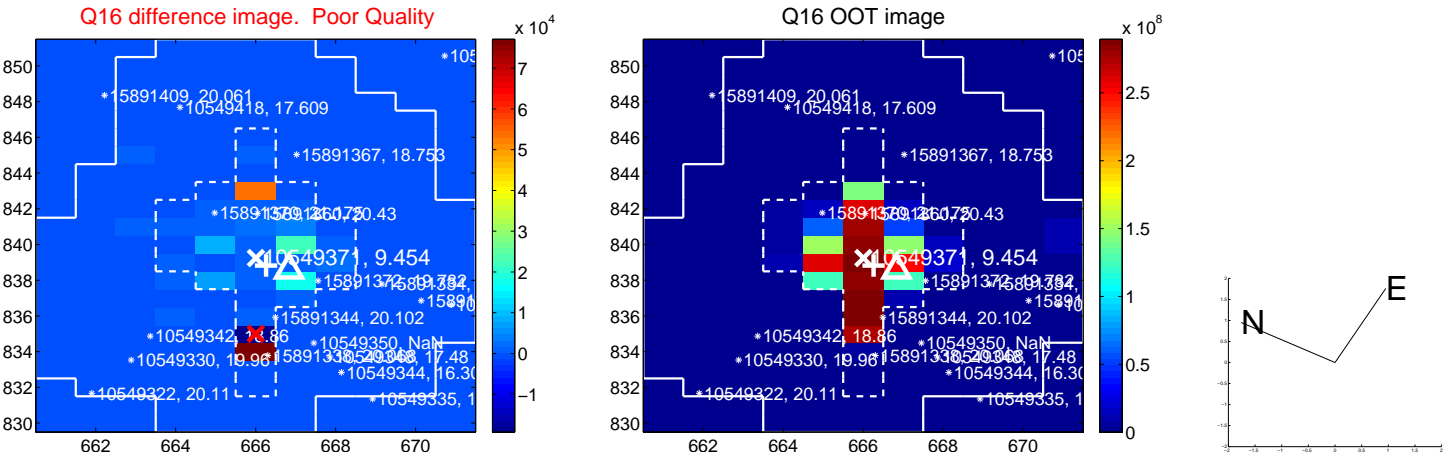
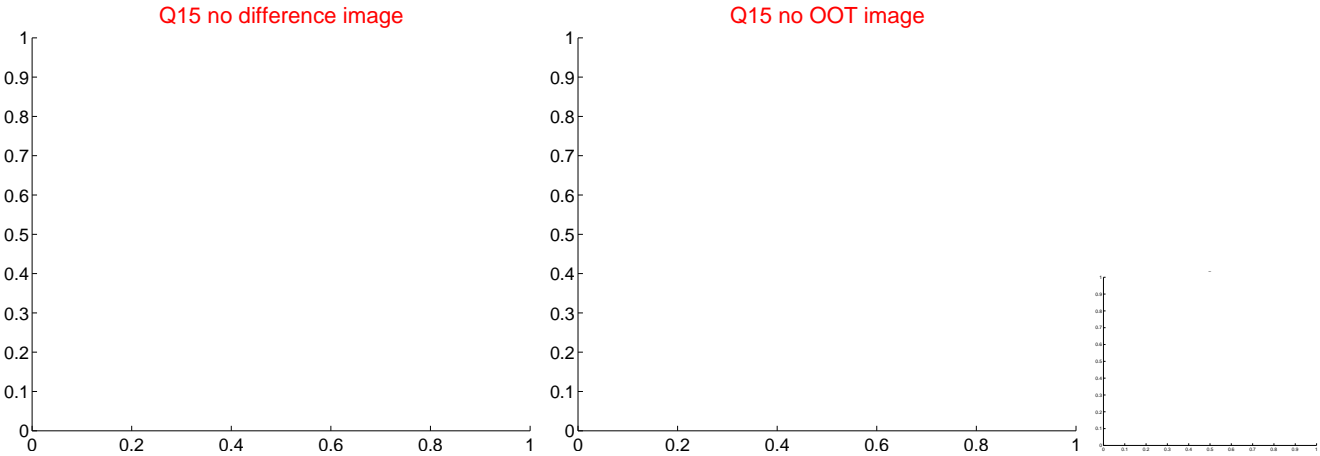
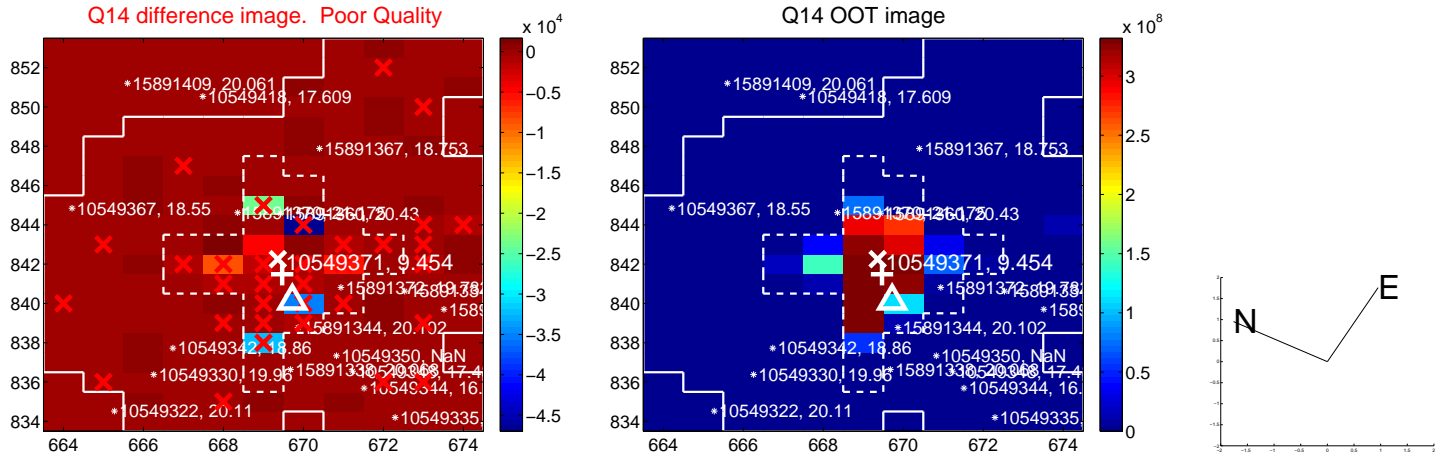
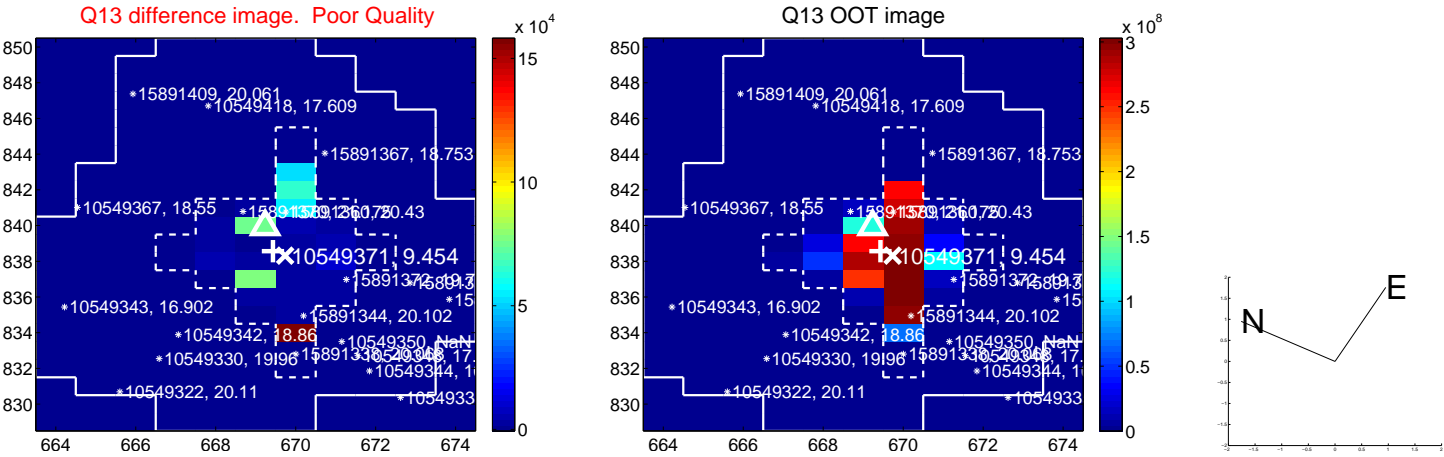
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

